



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,573	11/24/2003	Kiyoshi Yuri	03696/LH	9922
1933	7590	01/28/2008	EXAMINER	
FRISHAUF, HOLTZ, GOODMAN & CHICK, PC			REKSTAD, ERICK J	
220 Fifth Avenue			ART UNIT	PAPER NUMBER
16TH Floor			2621	
NEW YORK, NY 10001-7708			MAIL DATE	DELIVERY MODE
			01/28/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/723,573	YURI, KIYOSHI
	Examiner	Art Unit
	Erick Rekstad	2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 05 October 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-11 is/are pending in the application.
 - 4a) Of the above claim(s) 4,6,8,10 and 11 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-3,5 and 9 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 24 November 2003 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>11/24/03</u> .	6) <input type="checkbox"/> Other: _____.

DETAILED ACTION

This is a Non-Final Office Action for Application no. 10/723,573 in response to the Election made on October 24, 2007.

Election/Restrictions

Applicant's election without traverse of Group I in the reply filed on 10/24/2007 is acknowledged. Claims 1-3, 5 and 9 are presented for examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 9 is rejected under 35 U.S.C. 102(e) as being anticipated by US Patent 6,763,140 to Skoll.

[claim 9]

As shown in Figures 1 and 4, Skoll teaches the use of a computer workstation (136) for performing the method of determining the focus settings for a microscope (Col 1 Lines 13-16 and Col 8 Lines 45-53). Skoll further teaches the apparatus uses

predetermined focus points to provide the focus point for a current subimage (Col 2 Lines 50-61 and Col 3 Lines 25-38).

The method includes extracting an area including a sample image from an image captured as an entire sample (Col 11 Lines 13-16 and 41-46). Note, the extracted area is viewed to be the "focus facet" of Skoll. The "focus facet" contains the tile image which is to be acquired (Col 10 Lines 4-16, Col 11 Lines 10-12, Fig. 14).

The method further performs the operation of setting a plurality of horizontal positions in which a height coordinate Z is acquired from an extracted sample image area(Col 8 Lines 28-36, Col 10 Lines 52-56 and Col 11 Lines 53-56). As shown by the citation, each "focus facet" contains focus settings for a plurality of focus points.

The method further performs the operation of reading a height coordinate of a focal point position in the set horizontal position (Col 11 Lines 48-56).

The method further performs the operation of computing an adjusted position of a focal point in an arbitrary position in a sample image area using the set horizontal position and height coordinate data read in the horizontal position (Col 9 Lines 5-46, Col 11 Lines 48-56, and Col 12 Lines 7-16). As shown in the citation, Skoll teaches the operation of obtaining a focus setting. Skoll specifically teaches the focus setting for a tile image is computed from the focus points of a "focus facet" (Col 11 Lines 48-56).

The method further performs the operation of transferring the height value, obtained by computing an adjusted focal position, to an imager in order to obtain an image. This operation is performed when the sample is horizontally traveled (Col 11 Lines 57-67, Fig. 20).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,763,140 to Skoll.

[claim 1]

As shown in Figures 1 and 4, Skoll teaches the use of a computer workstation (136) for determining the focus settings for a microscope (Col 1 Lines 13-16 and Col 8 Lines 45-53). Skoll further teaches the apparatus uses predetermined focus points to provide the focus point for a current subimage (Col 2 Lines 50-61 and Col 3 Lines 25-38).

The apparatus performs a sample image area extraction unit extracting an area including a sample image from an image captured as an entire sample (Col 11 Lines 13-16 and 41-46). Note, the extracted area is viewed to be the "focus facet" of Skoll. The "focus facet" contains the tile image which is to be acquired (Col 10 Lines 4-16, Col 11 Lines 10-12, Fig. 14).

The apparatus further performs the operation of automatically setting a plurality of positions in an XY direction in which a height coordinate Z is acquired from a sample image area extracted (Col 8 Lines 28-36, Col 10 Lines 52-56 and Col 11 Lines 53-56).

As shown by the citation, each "focus facet" contains focus settings for a plurality of focus points.

The apparatus further performs the operation of reading a height coordinate of a focal point position in the position in the XY direction set by the previous operation (Col 11 Lines 48-56).

The apparatus further performs the operation of computing an adjusted position of a focal point in an arbitrary position in a sample image area using height coordinate data read by the above operation (Col 9 Lines 5-46 and Col 11 Lines 48-56). As shown in the citation, Skoll teaches the operation of obtaining a focus setting. Skoll specifically teaches the focus setting for a tile image is computed from the focus points of a "focus facet" (Col 11 Lines 48-56).

The apparatus further performs the operation of transferring the height value obtained to an imager in order to obtain an image. This operation is performed when the sample is horizontally traveled (Col 11 Lines 57-67, Fig. 20). Though Skoll is silent on each step performed by the apparatus as a unit, it would have been obvious to one of ordinary skill in the art at the time of the invention that the computer (136) is a unit which performs all the tasks of claim 1 as it is well known in the art to replace a hardware design, using multiple hardware units, with a computer and software in order to provide a low cost and easily upgradeable design (Official Notice).

[claim 2]

Skoll further teaches autofocus processing is performed on the focus points (Col 9 Lines 5-46). The height coordinate is then stored with the "focus facet"

(Col 10 Lines 4-16). Note, Skoll teaches a coarse and fine focus search. It is viewed by the Examiner that the output of the coarse autofocus process as input to the fine focus search satisfies the requirements of claim 2. Though Skoll is silent on each step performed by the apparatus is a unit, it would have been obvious to one of ordinary skill in the art at the time of the invention that the computer (136) is a unit which performs all the tasks of claim 1 as it is well known in the art to replace a hardware design, using multiple hardware units, with a computer and software in order to provide a low cost and easily upgradeable design (Official Notice).

[claim 3]

As shown in Figure 16, Skoll further teaches providing the image as a grid (Col 10 Lines 29-35). The grid is obtained by dividing a sample image area at predetermined intervals (Col 10 Lines 36-49). Skoll further teaches the height coordinate to be obtained (294) is covered by a mesh cell provided by a focus facet (Col 10 Lines 4-16 and Lines 52-56, Figs. 14 and 16). It is noted by the Examiner that the height coordinate of claim 3 is not indicated to be the defined height coordinate Z of claim 1, therefore it is viewed by the Examiner that any height coordinate satisfies the requirement of claim 3.

[claim 5]

As shown in Figure 4, Skoll teaches the use of a microscopic image capture apparatus which forms an entire image of high resolution by dividing into small sections an entire image (Col 1 Lines 12-16, Fig. 17).

The apparatus includes the setting a plurality of positions in which a height coordinate is acquired from among grid points including sample images at grid points of a grid having small sections (Col 8 Lines 28-36, Col 9 Lines 59-65, Fig. 13).

The apparatus further includes reading a height coordinate of a focal point position in horizontal coordinates of a sample (Col 11 Lines 48-56). Skoll teaches the use of the height coordinates to determine the height value of a tile under high magnification (Abstract, Col 11 lines 48-56 and Col 12 Lines 7-16). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention that the focus settings for the focus points are determined at high magnification as Skoll teaches the ability to use the focus setting of a focus point in order to obtain a tile image (Col 11 Lines 57-61, Col 12 Lines 7-16 and Lines 36-41).

The apparatus further includes computing a height position in an arbitrary position of a small section using height coordinate data obtained for the focus points (Col 9 Lines 5-46 and Col 11 Lines 48-56). As shown in the citation, Skoll teaches the operation of obtaining a focus setting. Skoll specifically teaches the focus setting for a tile image is computed from the focus points of a "focus facet" (Col 11 Lines 48-56).

Though Skoll is silent on each step performed by the apparatus is a unit, it would have been obvious to one of ordinary skill in the art at the time of the invention that the computer (136) is a unit which performs all the tasks of claim 1 as it is well known in the art to replace a hardware design, using multiple hardware units, with a computer and software in order to provide a low cost and easily upgradeable design (Official Notice).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent 7,027,628 to Gagnon et al.

US Patent 5,647,025 to Frost et al.

US Patent 6,101,265 to Bacus et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Rekstad whose telephone number is 571-272-7338. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number:
10/723,573
Art Unit: 2621

Page 9

Erick Rekstad
Examiner
AU 2621
(571) 272-7338
erick.rekstad@uspto.gov

